

### west virginia department of environmental protection

Office of Oil and Gas 601 57th Street SE Charleston, WV 25304 (304) 926-0450 (304) 926-0452 fax Earl Ray Tomblin, Governor Randy C. Huffman, Cabinet Secretary www.dep.wv.gov

December 06, 2013

### WELL WORK PLUGGING PERMIT

### Plugging

This permit, API Well Number: 47-9500661, issued to GASTAR EXPLORATION USA, INC., is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalities being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654

Chief

James Martin

Operator's Well No: M.W. SPENCER NO. 20

Farm Name: SPENCER, ALVA D., ESTATE

API Well Number: 47-9500661

Permit Type: Plugging
Date Issued: 12/06/2013

Promoting a healthy environment.

## **PERMIT CONDITIONS**

West Virginia Code § 22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

### **CONDITIONS**

- 1. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
- 2. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
- 3. Well work activities shall not constitute a hazard to the safety of persons.

WW-4B Rev. 2/01 1) Date: September 29, 2013

2) Operator's Well Number

M.W. Spencer No.20

API Well No: 47 - 095 - 0661

State County Permit

## STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS

### APPLICATION FOR A PERMIT TO PLUG AND ABANDON

4) WELL TYPE:	Oil		X	Liquid Injec			aste Dispos				
	(If "Ga	s", Production		Undergroun	d Storage		) Deep	Sha	allow	X	_
5) LOCATION:	Elevation:	821'		Watershed:							
	District:	McElroy	05	County:	Tyler	9	Qua	adrangle	Shirley	7.5'	607
6) WELL OPERA				494487685	7) DESIG	NATED	AGENT	Mike M			
Addres		. Main St., Suite	301			A	ddress		Main St.,		
		ourg, WV 26301						Clarksb	urg, WV	26301	l
8) OIL & GAS IN		BE NOTIFIED				GING CO	NTRACTO	)R			
Name Address	Joe Taylor 497 Claylich	r D and			Name Addres						
Address	Ripley, WV				Addres						
	, , , , , , , , , , , , , , , , , , ,			to the second second							
10) WORK ORDER	R: The work of	order for the mann	ner of pl	ugging this well	l is as follow	vs:					
<u>CASING</u>		TD-1,901'	Coal	: NA							
6" 1,717		Gel	100	01 - 1810							
6" 1,717 4" 560'		Plug No. 1		10 - 1670							
. 500		Pull 4" Casin		10 - 1070							
		Freepoint, Cu		ll 6" Casing at	850' (Est.)	)					
		Plug No. 2	90	00 - 800							
<u>LINERS</u>		Plug No. 3		50 - 350							
		Plug No. 4	1	00 - Surface							
				NOTES:							
				all casing strin	gs present.	Place 100	oft. cement	plug at be	ottom		
		of any cas									
		Fill Well Bore	with 6%	6 Gel Between a	ıll Cement F	Plugs			1		
		Erect Monum	ent wit	n API No.			Hece	:10	O		
							DACE	3110	120		
ALL PL	ues Mus	T BE A A CEMENT	MIN	HUM OF		1	HOO	### ### ### ### ### ### ### ### ### ##			
100' OF	CLASS	A CEMENT	WIT	H NO M	ORE			6 30			
THAN 2	To Cac	ile AND NO	OTH	וחדוקמת חף	25		MON				
ALCOHOL STATE							MA Debr.	is in	d Gas	oction	
							Off	ice of Onionn	ientai,		
Inspector 24 hours	before perm	itted work can c	ommen	ice.			IN Dept.	Of Elle			
	-						Ma				
			/	20							
Work order app	royed by Inc.	neator //	6	11/				Date 14	-25-1	?	
work order app	noved by ms	pector						Date 10	60 1		
		6									

### WELL RECORD

Operator: Gastar Exploration, Ltd.

229 West Main Street Clarksburg, WV 26301 (304) 622-4796

Well: M.W. Spencer No.20

**API** 47-095- 0661

**Latitude:** 39°25'43.8"

**UTM Coordinates (NAD 1983)** 

**Longitude:** 80°47'11.4"

**Northing:** 4,364,399

Elevation: 821

**Easting:** 518,390

TD: 1,901

**Casing Record** 

**Producing Formation:** Big Injun

6" 1,717

**Spud Date:** 9/4/1920

**Completion Date:** 10/15/1920

4" 560

Well Log

Not Available

Roceived

Office of Oil and Gas Office of Oil and Gas WV Dept. of Environmental Protection

WW-4A Revised 6-07 Surface Owner Copy

(a) Name

Address

Surface Owner(s) to be served:

Alva D. Spencer Estate

C/O Marcia Mronzinski

3471 Maradee Ct.

CK 35127

1)	Date: September 29, 2013						
2)	Operator's Wel	Number					
		M.W. Spe	ncer	No.20			
3)	API Well No:	47	4	095	-	0661	
		State		County		Permit	

# STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL

5) (a) Coal Operator:

NA

Name

Address

	(b) Name Address	Farwell, MI 48622	Name	ner(s) with Declaration NA	Bitte Mad Stocked Standard 1
	(c) Name		Address		Credit
	Address		Name		
			Address	NA	
6)	Inspector	Joe Taylor	(c) Coal Les	see with Declaration	
	Address	497 Claylick Road	Name		
	Telephone	Ripley, WV 25271 304-380-7469	Address	i was or to	al a la mar l
				de apreca	s Ar allek selt male
	то тня	E PERSON(S) NAMED ABOVE	You should have receive	d this Form and the following	documents:
		The Application to Plug and Aband	lon a Wall on Form WW 4D	which gots out the neutice in-	a land
		in the work, and describes the well			orved
		2) The plat (surveyor's map) showing	the well location on Form W	W-6	
	The reaso	on you have received these documents is the	at you have rights regarding	the application which are sum	marized
		ructions on the reverse side. However, you			
	Take noti	ce that under Chapter 22-6 of the West Vi	rainia Cada, the undersigned	wall aparator proposes to file	or has
		Notice and Application and accompanying			
	of the Off	fice of Oil and Gas, West Virginia Departr	nent of Environmental Protect	ction, with respect to the well	at the
		described on the attached Application and on, and the plat have been mailed by regis			
		by publication in certain circumstances) of			named
			St. of Comp. Inc.		11 11 1 
			Well Operator	Gastar Explorat	ion, Ltd.
			7	1,20	Clifugher blac
			By: Its:	COO & Designated Ag	Mike McCown
			Address	229 W. Main St., Suite	2 301
			a trium along to the	Clarksburg, WV 2630	
			Telephone	(304) 622-4796	100
		1			ol 6
S	Subscribed and	d sworn before me this	day of Oct	nher 2013	MOV and Gas Protect
			1/7	11.	NOV  Nota Pit Se of oil and Gas projectic
			Lound h.	hhm	Notaby Rublic
	N	My Commision Expires	June 1.	1, 2020	OFFICIAL SEAL
				A TO THE THE	Notary Public, State of West Virginia
					DAVID W. PERKINSON 377 Eastview Drive
				A Principal Control of the Control o	Parkersburg, WV 26104 My commission expires June 11, 2020

### SURFACE OWNER WAIVER

Operator's Well Number M.W. Spencer No.20 47- 095-00661

Date

### INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW4-A

The well operator named on page WW-4A is applying for a permit from the State to plug and abandon a well. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.
WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

Time Limits and methods for filing comments. The law requires these materials to be served on or before the date the operator files his Application. You have FIVE (5) DAYS after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Comments must be in writing. Your comments must include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons.
- 2) The soil erosion and sediment control plan is not adequate or effective;
- 3) Damage would occur to publicly owned lands or resources;
- 4) The proposed well work fails to protect fresh water sources or supplies;
- 5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation...".

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

VOLUNTARY STATEMENT OF NO OBJECTION

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application For A Permit To Plug And Abandon on Forms WW-4A and WW-4B, and a survey plat.

ara rippinonvious a or an a constant	
I further state that I have no objection to the pla	anned work described in these materials, and I have no
objection to a permit being issued on those materials. FOR EXECUTION BY A NATURAL PERSON	FOR EXECUTION BY A CORPORATION,
ETC.	
Hayera My March Date H 5 20	Name
Signature	Ву
	Its Date

Signature

Form WW-9

	Page_	3	of	3
API	Number 47-	095	· -	0661
Operator's Well No.	M.W. S	pencer	No.20	

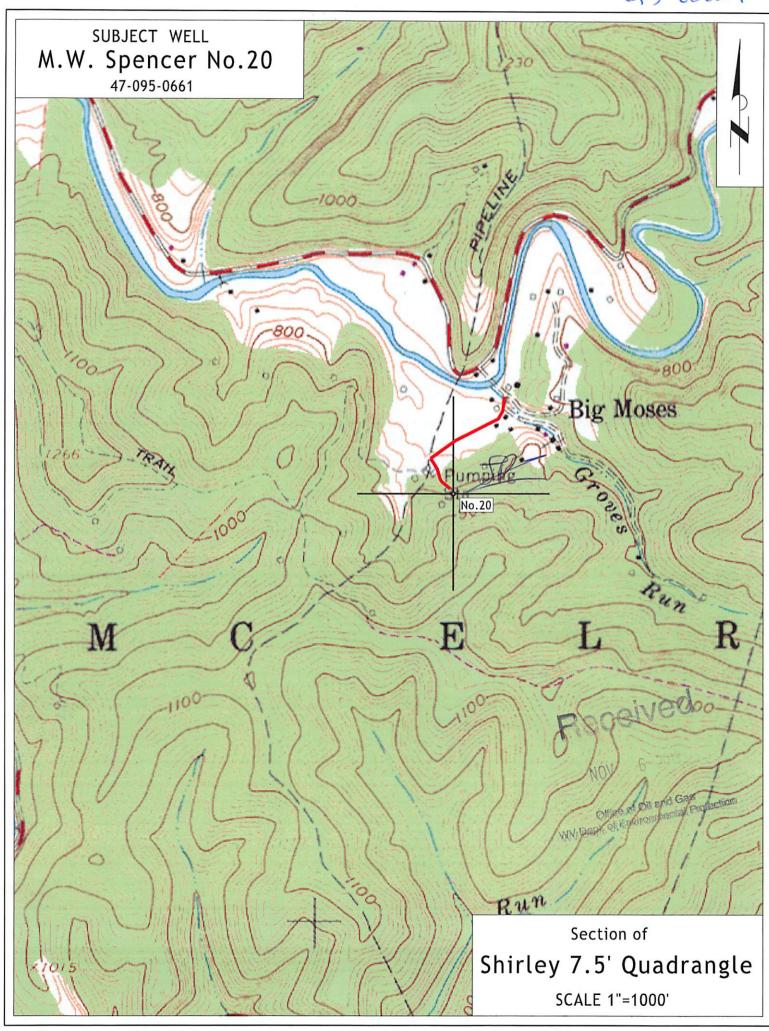
### STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS

### CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator	Gastar Ex	ploration, Ltd	•			OP Code	494487685
Watershed	Indian Cr	eek			Quadrangle_	Shir	ley 7.5'
Elevation	821'	County	Tyler		District	Mo	Elroy
Description of	of anticipated Pit Waste:	Fluids encou	intered in plug	ging subje	ect well		
Do you antici	ipate more than 5,000 bbls	of water to comp	lete the proposed w	ell work?	Yes	No	<u>X</u>
Will a synthe	etic liner be used in pit?	Yes	If so, what mil.?	<u>1</u> 0	20		
Proposed Dis	posal Method For Treated	Pit Wastes:					
	X Land Applic	ation					
		-	Permit Number				)
	Reuse (at Al		Will O fan dianas	المستخمصا الس			)
	Other	osai (Suppiy Po (Explain	rm WW-9 for dispos	ai iocation)			
Drilling mod	ium anticipated for this we	· • —	ter oil based etc	NA		· · · · · · · · · · · · · · · · · · ·	
•	- If oilbased, what type? S						
Additives to	be used?						
	s disposal method? Leave i				NA		
	- If left in pit and plan to s		dium will be used?	Cement, lin	ne, sawdust _	N.	A
	- Landfill or offsite name/p	ermit number?					
that the prov applicable la this applicati for obtaining	gust 1, 2005, by the Office of isions of the permit are enformed and to I certify under penalty of later form and all attachment the information, I believe the submitting false information.	orceable by law. enforcement act aw that I have po ts thereto and th that the informa	Violations of any to ion. ersonally examined at, based on my inc tion is true, accurat	erm or condi and am fan Juiry of thos e and compl	tion of the gener viliar with the in ce individuals im lete. I am awarc	al permit a formation : mediately :	nd/or other submitted on responsible
	fficial Signature		Issha Mu	سير.		101 5	
Company O	fficial (Typed Name)		Mike McCown			, YOW	
Company C	fficial Title		COO & Design	nated Age	ent	On the state	and Gas modion
					_	One of Sun	Out the stand
Subscribed	and sworn before the thi	1 4/1/h	day of	ctobe	)	13_	
<del> </del>	X/12n/	1/2 /	7 lin			Notary Pu	blic
My commis	sion expires	June	11, 2	020	,		
Form WW-9	0		/				OFFICIAL SEAL y Public, State of West Virginia VID W. PERKINSON

## Legend

Property Boundary		Diversion	
Road		Spring	
Existing Fence	— x — x — x	Wet Spot	~
Planned Fence	//_	Drain Pipe	12 >
Stream	1-7 1-7	Waterway	$\leftrightarrow$ $\leftrightarrow$ $\leftrightarrow$
Open Ditch	>>	Cross Drain	
Rock	000000000000000000000000000000000000000	Filter Strip	XXXXXXXXXX
		Pit: Cut Walls	Children
North	N	Pit: Compacted	yelli
Buildings		Fill Walls	
Water Wells	W	Area of Land	
Drill Site	$\oplus$	Application of Pit Waste	
	Fertilizer (10-20-20 or Equivalent)  Mulch Straw 2  S  Area I (Location)	Tons/Acre EEED MIXTURES	6.5 e (500 lbs. Minimum)  Area II (Road)
Seed Type	Lbs/Ac.	Seed Ty	pe Lbs/Ac.
Tall Daggue	40		
Tall Fescue Ladino Clove	40 r 5	Tall Fesc Ladino C	ue 40
		Tall Fesc	ue 40
		Tall Fesc	ue 40 lover 5
Ladino Clove  attach: brawing(s) of road, lo		Tall Fesc Ladino C	lover 5
Ladino Clove  attach:  brawing(s) of road, le  hotocopied section of	ocation, pit and proposed area for land of involved 7.5' topographic sheet.	Tall Fesc Ladino C	lover 5
Ladino Clove  attach: brawing(s) of road, lo	ocation, pit and proposed area for land of involved 7.5' topographic sheet.	Tall Fesc Ladino C	ue 40 lover 5
Ladino Clove  Attach:  Drawing(s) of road, le hotocopied section of the provided section of the provided by Comments:	ocation, pit and proposed area for land of involved 7.5' topographic sheet.	Tall Fesc Ladino C	NOV Dept of oil and Gas protection with Dept of the protection and protection and protection with Dept of the protection and protection and protection are a second and a second are a second are a second and a second are a second are a secon
Ladino Clove  Attach:  Drawing(s) of road, le hotocopied section of the provided section of the provided by Comments:	ocation, pit and proposed area for land of involved 7.5' topographic sheet.	Tall Fesc Ladino C	lover 5



### West Virginia Department of Environmental Protection Office of Oil & Gas

## WELL LOCATION FORM: GPS

API: 47	- 095 - 0661	7 F 1	WELL NO:	No.20	
FARM NAME:	M.W. Spencer				
RESPONSIBLE PARTY	NAME: Gastar	Exploration, l	Ltd.		
COUNTY:	Tyler		DISTRICT:	McElroy	
QUADRANGLE:	Shirley 7.5'				
SURFACE OWNER:	Alva D. Spencer F	Estate			
ROYALTY OWNER:	Alva D. Spencer F	encer Estate			
UTM GPS NORTHING:	4,364,399	(NAD 83)			
UTM GPS EASTING:	518,390	(NAD 83)	GPS ELEVATION:	250 m. 821	
<ol> <li>Datum: Na height abo</li> <li>Accuracy t</li> <li>Data Colle</li> </ol>	GPS coordinates that do no AD 1983, Zone:17 North, Give mean sea level (MSL) - reso Datum - 3.05 meters action Method:  GPS Post Processed Decreased Decreas	Coordinate Uneters.	nits: meters, Altitu	Received	
Mapping Grade	Real-Time Difference GPS X Post Processed Difference Real-Time Real-Time Difference Real-Time Real-Ti	ifferential	X	NOV 6 2013  Office of Oil and Gas  Dept. of Environmental Protection	
	certify this data is correct to aformation required by law a f Oil and Gas.  Mike McCown	and the regula	ny knowledge and		
September 29, 20	013		THE		
Date					